L'VITSYNA, G.M.

Characteristics of cutaneous allergic reactions to bacterial allergens in irradiated animals. Med. rad. 4 no.5:12-17 My '59. (MIRA 12:7)
(ROENTGEN RAYS, eff.
on cutaneous allergic reactions to bact. allergens in guinea pigs (Rus))
(ALLERGY, exper.
eff. of x-irradiation on cutaneous reactions to bact. allergens in guinea pigs (Rus))
(SKIN, physiol.
reaction to bact. allergens, eff. of x-irradiation in guinea pigs (Rus))

L'VITSYNA, G.M.; BALIKA, Yu.D.

Antigenic properties of the marrow tissue in irradiated dogs. (MIRA 14:11)
Radiobiologiia 1 no.5:738-741 '61.
(MARROW) (X RAYS--PHYSIOLOGICAL EFFECT)
(ANTIGENS AND ANTIBODIES)

S/205/62/002/004/011/014
I015/I215

AUTHORS: L'vitsyna, G.M. and Balika, Yu.D.

TITLE: The antigenic structure of globulin obtained from perfused tissues of irradiated dogs

PERIODICAL: Radiobiologiya, v.2, no.4, 1962, 590-594

TEXT: This is the continuation of previous studies. Experiments were carried out on 4 dogs. Gamma-globulins were obtained from a perfused lower extremity of a dog both before, and 3 days after a single whole-body X-irradiation, with 800r, at a dose rate of 17r/min. The globulin fraction was separated with a 50% saturated ammonium sulphate solution. The antigenic properties of the dog's perfusate were determined as follows: 1) by Zil'ber's method (1956) on a model of anaphylaxis reaction with desensitization, on guinea pigs; 2) by the production of local anaphylaxis in rabbits (Arthus-Sakharov phenomenon); and 3) by the complement fixation reaction (recording the production of anti-

Card 1/2

S/205/62/002/004/011/014
I015/I215

The antigenic structure...

bodies to globulin following the injection of globulins to healthy dogs). In the perfusate of irradiated dogs, the gamma globulin fraction contained less antigenic complexes. The experiments on the production of the Arthus phenomenon showed a lower antigeneity of the gamma-globulin obtained from tissue perfusates of irradiated dogs, and revealed the production of antibodies to the injected globulin, which indicates an altered antigeneity of the globulin due to irradiation. There are 3 tables.

SUBMITTED: February 8, 1962

Card 2/2

S/205/63/003/001/012/029
E028/E185

AUTHORS: Balika Yu.D., and L'vitsyna G.M.

TITLE: Some results of the investigation of tissue perfusate in the study of toxaemia in irradiated animals

PERIODICAL: Radiobiologiya, v.3, no.1, 1963, 59-62

TEXT: The authors have studied perfusates of the tissues of irradiated animals with the object of identifying the cause of the toxaemia seen in radiation sickness. Perfusion of a limb with 5 - 7 litres of saline over a period of 40 - 45 minutes was carried out in ten normal dogs to obtain control data, and two to three weeks later the animals were irradiated with X-rays in a dose of 800 r. On the third day, when maximum toxaemia was observed, the perfusion was repeated in seven animals; samples of perfusate were taken every 5 minutes for 45 minutes, the blood cells present were counted, and the content of proteins was determined by paper electrophoresis. Complete antibodies were determined by agglutination and incomplete antibodies by the Coombs method; the cytolytic effect of the perfusate upon leucocytes was also studied. In the normal animal cells were present in the perfusate at first,

but disappeared rapidly and were absent after 20 - 40 minutes; no difference was observed in these events after irradiation. There were also changes in the albumin-globulin ratio after perfusion, but again there was no significant difference after irradiation. No antibody was found, and incomplete antibody appeared in the perfusate in one animal only. The results show that the blood cells and incomplete antibody are not concerned in the genesis of post-radiation toxaemia. The leucosin type auto-antibodies are probably one of the causes of toxaemia in the irradiated body.
There are 3 figures.

SUBMITTED: June 11, 1962

Card 2/2

L 11232-63 EWT(l)/EWT(m)/BDS--AFFTC/AMD/ASD--AR/K

ACCESSION NR: AP3003928 S/0205/63/003/004/0529/0534

55

AUTHOR: Balika, Yu. D.; L'vitsy*na, G. M.

TITLE: Importance of tissue globulins in the development of toxemia after irradiation 19

SOURCE: Radiobiologiya, v. 3, no. 4, 1963, 529-534

TOPIC TAGS: radiation sickness, toxemia, humoral factor, tissue globulin, Gamma globulin

ABSTRACT: An investigation is made of the biological properties of gamma globulin which has been isolated from a perfusate of irradiated dog tissue and the immunobiological capacity of the organism. Experiments in vitro and in vivo show that the biological activity of the globulin tested differs from that of the gamma globulin of a perfusate from the same animals before irradiation. The irradiated specimen exhibits considerable leucolytic ability in vitro experiments. The intravenous introduction of this globulin in healthy dogs causes a worsening of their clinical condition, depression of erythropoiesis, and a noticeable suppression of immunobiological activity. It is concluded that the gamma globulin washed out of irradiated tissue in perfusion is one of the toxemic

Card 1/2 factors in radiation sickness

L'VITSYNA, G.M. (Moskva); KLEMPARSKAYA, N.N., prof., nauchnyy rukovoditel' raboty

Agglutination reaction with blood lysate. Lab. delo no. 12:736-737 '64. (MIRA 18:1)

L 58431-65

ACCESSION NR: AP5015722 UR/0205/65/005/003/0334/0337
577.391

AUTHOR: L'vitsyna, G. M.; Balika, Yu. D. 26 B

TITLE: Study of the biological activity of globulin from a tissue perfusate of irradiated and non-irradiated dogs (experiments on rabbits)

SOURCE: Radiobiologiya, v. 5, no. 3, 1965, 334-337

TOPIC TAGS: radiation, radiobiology, gamma globulin, hemopoiesis, erythrocyte, antigen, leukocyte

ABSTRACT: The authors' earlier experiments showed that globulin isolated from a tissue perfusate of irradiated dogs has a toxic effect when injected into healthy dogs. In this series of experiments, they studied the effect of γ-globulin injected intravenously into male rabbits. Globulin from either irradiated or non-irradiated dogs significantly reduced the number of erythrocytes but sharply increased the leukocyte count in the rabbits. Globulin from irradiated dogs had no effect on the qualitative or quantitative composition of the microflora of the oral cavity, whereas globulin from non-irradiated dogs altered it considerably. One to three

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L 58431-65

ACCESSION NR: AP5015722

days after injection, lactose-positive *E. coli* were isolated from the rabbits' oral cavity and there was an increase in the number of colonies of microflora that normally inhabit the animals' intestine. The authors believe that due to a decrease in antigenicity, globulin from irradiated dogs becomes less foreign to other species of animals, rabbits in particular, and has no effect on their oral microflora. On the other hand, the impairment of erythrocytopoiesis and associated changes in the peripheral blood may be due to its toxic properties. These results were the same as those in the authors' experiments on dogs in which one of the changes that followed the injection of γ-globulin was marked suppression of erythrocytopoiesis. Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 23Jul63 ENCL: 00 SUB CODE: LS

NO REF SOV: 005 OTHER: 000

Card 2/2

L 1251-66 EWT(1)/EWA(j)/EWT(m)/EWA(b)-2

ACCESSION NR: AP5020418 UR/0205/65/005/004/0540/0542
612; 017.1; 577.391

AUTHOR: L'vitsyna, G. M.

TITLE: Effectiveness of initial immunization and revaccination with live Brucella vaccine in an organism with radiation injury induced by internal emitters

SOURCE: Radiobiologiya, v. 5, no. 4, 1965, 540-542

TOPIC TAGS: experiment animal, radio strontium, polonium, radioisotope, immunology, vaccine, brucellosis, antibody

ABSTRACT: The development of antibodies was studied in animals with chronic radiation sickness by determining delays in the immune reaction following introduction of radioisotopes and observing specific reactions to first and second contacts with bacterial antigens. In a study of 120 guinea pigs, 25 received Po^{210} subcutaneously (0.5 microcuries/kg), 25 animals received Sr^{90} intraperitoneally (0.5 microcuries/kg), and the rest served as controls. After introduction of the radioisotopes, the animals were vaccinated 3, 6 and 12 mos later with an initial dose of 1 billion

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L 1251-66
ACCESSION NR: AP5020418

bacteria and a second dose of 100 million bacteria administered 2 mos after the first. Antibody formation was determined by agglutination titers. After the first vaccination, antibody titer in Po^{210} treated guinea pigs was almost the same as for controls, although it developed much more slowly in animals vaccinated after 6 and 12 mos. However, antibody titers differed sharply after revaccination. While the antibody titers of control animals were 2-3 times higher than after the first vaccination, those of the experimental animals dropped below the initial level. Results for Sr^{90} treated animals were essentially the same. Thus, small doses of polonium-210 and strontium-90 not leading to serious changes in the organism can seriously affect its immune reaction, and this may often be detected only upon revaccination. Orig. art. has: 2 figures.

ASSOCIATION: None.

SUBMITTED: 25Sep63 ENCL: 00 SUB CODE: LS

NR REF SOV: 004 OTHER: 000

Card 2/2

L 11275-67 EWT(1)// SOTB DD/AMD

ACC NR: AT6029633 SOURCE CODE: UR/0000/66/000/000/0242/0254

AUTHOR: Lebedinskiy, A. V. (deceased); Nefedov, Yu. G.; Domshlak, M. P.; Kompaniyets, N. N.; Moskalev, Yu. I.; Ryzhov, N. I.; Daronskaya, N. G.; Bibikova, A. F.; Ganshina, [illegible]. N.; Lobedov, B. I.; L'vitsyna, G. M.; Shashkov, I. F.; Dorbonova, N. I.; Gerasimova, G. K.

ORG: none

TITLE: Model investigations of cosmic radiation biologic effect

SOURCE: Voprosy obshchey radiobiologii (Problems of general radiobiology). Moscow, Atomizdat, 1966, 242-254

TOPIC TAGS: dog, rat, induced radiation effect, cosmic radiation biologic effect, proton radiation biologic effect, relative biologic efficiency

ABSTRACT: With space flights of longer duration, cosmic rays, radiation belts and solar flares present an increasing danger to astronauts. However, relatively little is known of the biologic effect of cosmic radiation and its components, particularly high energy protons. In the present study the RBE of high energy protons was compared in large laboratory animals (dogs) and small laboratory animals (rats) to determine possible RBE differences. In a series of experiments groups of dogs were irradiated with high energy protons and X-irradiation (or gamma irradiation) in fractional and

Card 1/2

L 11275-67

ACC NR: AT6029633 O

single doses of 250 to 650 rads; groups of rats (Wistar line) were also irradiated in fractional and single doses of 300 to 1200 rads. A synchrocyclotron was used for proton irradiation (510 Mev, field diameter 40 cm, dose rate of 1 rad/sec). Clinical symptoms, histological investigations, EEG data, mean survival periods, and post mortem examinations served as indices. Results show that with fractional dose irradiation of dogs, the RBE of proton irradiation (510 Mev) and X-irradiation (180 kv) is the same (1.0). With fractional irradiation of rats, the RBE of proton irradiation is 0.8. With single dose irradiation of dogs, the RBE of protons is 1.15 compared to gamma irradiation. With single dose irradiation of rats, the RBE of protons is 0.75 compared to gamma irradiation. No conclusions are drawn. Orig. art. has: 4 tables and 6 figures.

SUB CODE: 06/ SUBM DATE: 23Apr66/ ORIG REF: 004/ OTH REF: 004

Card 2/2 jb

PETROV, R.V.; L'VITSYNA, G.V.

Incomplete antibodies detected with the aid of Coombs' test in the blood of irradiated animals. Pat. fiziol. i eksp. terap. 6 no.4:63-68 Jl-Ag '62. (MIRA 17:8)

L'VOV, A. (g.Aleksandriya Kirovogradskoy oblasti)

Group of innovators. Mast.ugl. 8 no.9:5 S '59.
(MIRA 13:2)

(Coal miners)

L'VOV, A. (Aleksandriya, Kirovogradskoy oblasti)

Esteemed builder. Sov.shakht. 13 no.1:7-8 Ja '64. (MIRA 17:3)

ACC NR: AN6027300 (N) SOURCE CODE: UR/9034/66/000/065/0003/0003

AUTHOR: L'vov, A. (Professor)

ORG: none

TITLE: Agents of primary virus infection

SOURCE: Meditsinskaya gazeta, 12 Aug 66, no. 65, p. 3, col. 1-4

TOPIC TAGS: virology, infective disease

ABSTRACT:
At the IX International Congress of Microbiology in Moscow, Prof. Andre L'vov discussed his theory that nonspecific factors appear with essentially important determinants of primary viral infections. Correlations between thermal stability and virulence were made. Heat was shown to be a direct factor in the development of virulent and avirulent strains. Thermally sensitive viruses were generally avirulent; thermally stable viruses were virulent. By correlation, increased temperature was shown to be a nonspecific reaction of an infected organism. Other nonspecific reactions as demonstrated in experiments with mice were increased temperature, low pH, and interferon forma-

Card 1/2

ACC NR: AN6027300

tion. To support his position, Prof. L'vov referred to the experiments of D. Yenders and S. Baron. [WA-50; CBE No. 11]

SUB CODE: 06/ SUBM DATE: none/

Card 2/2

L'VOV, A.A.

Experience in making large steel castings with melted-out patterns.
[Izd.] LONITOMASH 45:94-98 '58. (MIRA 11:6)
(Steel castings)

L'VOV, A.A., kandidat tekhnicheskikh nauk, dotsent; KOROTENKO, M.L., kandidat tekhnicheskikh nauk, dotsent.

Determining the dynamic characteristics of two-axle flat cars and two-axle tank cars under various factory spring rates and arches. Trudy DIIT no.25:196-218 '56. (MIRA 10:1)
(Railroads--Cars) (Tank cars)

Dnepropetrovsk Inst. of RR Engineers

LAZARYAN, V.A., professor, doktor tekhnicheskikh nauk; KOROTEYEV, I.M., kandidat tekhnicheskikh nauk; L'VOV, A.A., kandidat tekhnicheskikh nauk.

Improving the utilization of flat-car and gondola-car load capacity. Zhel. dor. transp. 38 no.11:67-69 N '56. (MLRA 9:12)

(Railroads--Cars)

LAZARYAN, V.A., prof.; FRISHMAN, M.A.; L'VOV, A.A., kand.tekhn.nauk; LIPOVSKIY, R.S., inzh.; BERMAN, Z.G., inzh.; LEVANKOV, I.S., inzh.

Wheel and rail interaction forces caused by short-distance unevenness of the track. Vest.TSNII MPS 19 no.6:9-12 '60. (MIRA 13:9)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta.
(Railroads--Rails) (Car wheels)

VERIGO, M.F., doktor tekhn. nauk; LAZARYAN, V.A., doktor tekhn. nauk; GRACHEVA, L.O., kand. tekhn. nauk; L'VOV, A.A., kand. tekhn. nauk; ANISIMOV. P.S., inzh.

Dynamic qualities of eight-axle gondola cars and their action on the track. Vest. TSNII MPS 22 no.7:3-9 '63. (MIRA 16:12)

L'VOV, A.A., kand. tekhn. nauk

Design of the longitudinal elements of car frames. Trudy DIIT no.24:63-71 '54. (MIRA 16:11)

L'VOV, A.A., kand. tekhn. nauk; MUZ KIN, V.A., inzh.

Dynamics of four-axle gondola cars under the conditions of asymmetrical load. Vest. TSNII MPS 24 no.4:8-12 '65.
(MIRA 18:7)

L'VOV, A.; KAGAN, Ye., prepodavatel'.

Training livestock farm mechanizers. Prof.-tekh. obr. 11 no.5: 8-10 Ag '54. (MLRA 7:9)

1. Direktor uchilishcha mekhanizatsii sel'skogo khozyaystva No. 19 (Mogilevskaya oblast') (Mogilev--Farm mechanization--Study and teaching) (Farm mechanization--Study and teaching--Mogilev)

L'VOV, Aleksey Andreyevich, prepodavatel'; PESTRYAKOVA, S.V., red.; MAKHOVA, N.N., tekhn.red.

[Mechanization and electrification of agriculture] Mekhanizatsiia i elektrifikatsiia sel'skogo khoziaistva. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 427 p. (MIRA 11:4)

1. Anapskiy sel'skokhozyaystvennyy tekhnikum (for L'vov)
(Agricultural machinery) (Rural electrification)

L'VOV, A.; KAGAN, Ye., prepodavatel'; URVANTSEV, G.

Training the mechanical ear of machine operators. Prof.-tekh. obr. 21 no.8:12-13 Ag '64. (MIRA 17:9)

1. Direktor Mogilevskogo sel'skogo professional'no-tekhnicheskogo uchilishcha No.1, Belorusskaya SSR (for L'vov). 2. Starshiy inzh. laboratorii TSentral'nogo uchebno-metodicheskogo kabineta (for Urvantsev).

L'VOV, Aleksey Andreyevich; KALASHNIKOV, P.A., red.

[Mechanization and electrification of agriculture] Mekhanizatsiia i elektrifikatsiia sel'skogo khoziaistva. Izd.2., perer. Moskva, Kolos, 1965. 422 p. (MIRA 18:2)

COUNTRY : USSR
CATEGORY : Farm Animals. Honeybee

ABS. JOUR. : RZBiol., No. 13 1958, No. 59647

AUTHOR : L'vov, A.F.
INST. : -
TITLE : Elimination of Humidity from Beehives during the Wintering of Honeybees

ORIG. PUB. : Pchelovodstvo, 1957, No.12, 44

ABSTRACT : During the wintering of honeybees in the open, humidity appeared in the corners of the hives, resulting in a great loss of bees. The bees wintered very well in a basement with a temperature of 2 to 6° and good ventilation in the upper part of the hive.

CARD: 1/1

2 -80

L'VOV, A.G.

Standardization office at the "Koksokhimmash" Plant. (MIRA 16:4)
Standartizatsiia 27 no.3:48-50 Mr '63.
(Slavyansk--Machinery industry--Standards)

L'VOV, A. T.

USSR/Engineering - Hydraulics, Structures — Jul 51

"Elimination of Fan-Like Deviations in the Process of Driving Sheet Piles," A. I. L'vov, A. Ya. Sen-ebro, Engineers

"Gidrotekh Stroi" No 7, pp 28-30

Suggests method developed by V. I. Petrashen', Cand Tech Sci. Each sheet pile is equipped with shoe, covering its front joint and creating addnl resistance. Simultaneously this joint is protected against filling with dirt, this factor decreasing friction during driving in of next pile.

199762

USSR/Engineering - Hydraulics, Structures (Contd) — Jul 51

Addnl resistance at front edge and decreased friction in rear joint create a tilting moment which helps to keep pile in vertical position.

199762

L'VOV, A.I.

L'VOV, A.I., inzhener

Experience in using sliding formwork for the upper structure of reinforced concrete embankments. Sbor.mat.o nov.tekh.v stroi.17 no.8:22-24 '55. (MLRA 8:11)
(Concrete construction--Formwork) (Embankments)

L'VOV, A.I.

GORYUNOV, B.F., kand.tekhn.nauk; L'VOV, A.I., inzh.

Prestressed reinforced concrete piles. Biul.tekh.inform. 3 no.2:16-20 F '57. (MIRA 10:10)
(Concrete piling--Testing)

SOV/97-58-12-13/13

AUTHOR: L'vov, A.I., Engineer

TITLE: Reinforced Concrete Dock Gates (Zhelezobetonnyye zatvory dokov).

PERIODICAL: Beton i Zhelezobeton, 1958, Nr.12, pp.475-477 (USSR)

ABSTRACT: The construction in England of two large reinforced concrete dry dock gates is described and evaluated. There are 2 figures and 2 tables.

Card 1/1

L'VOV, A.I., inzh.

Driving tabular reinforced concrete piles by the method of pressing.
Transp. stroi. 11 no.2:26-28 F '61. (MIRA14:2)
(Leningrad--Piling (Civil engineering))

GORNOV, B.F., doktor tekhn. nauk, prof.; L'VOV, A.I., inzh.; EKSARKHOPULO, A.N., nauchnyy red.; REYZ, M.B., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Hydraulic structures of industrial enterprises made of prestressed concrete]Gidrotekhnicheskie sooruzheniia promyshlennykh predpriiatii iz predvaritel'no napriazhennogo zhelezobetona. Moskva, Gosstroiizdat, 1962. 179 p. (MIRA 15:8)
(Hydraulic structures) (Prestressed concrete construction)

L'VOV, A.I., inzh.

Selecting the type of a dock water gate. Sudostroenie 29 no.8:65-69 Ag '63. (MIRA 16:10)

(Dry docks—Design and construction)

L 8149-66 EWP(j)/EWT(m)/EPF(c) RPL WW/JW/RM

ACC NR: AP5027694 SOURCE CODE: UR/0062/65/000/010/1905/1907

AUTHOR: Zakharkin, L. I.; L'vov, A. I.; Podvisotskaya, L. S.

ORG: Institute of Organo-elemental Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy, Akademii nauk SSSR)

TITLE: Electron acceptor nature of the neobarene (neocarborane) system

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1965, 1905-1907

TOPIC TAGS: organoboron compound, chemical reaction, chemical bonding

ABSTRACT: The possibility of rupturing the C-C bond in neobarene compounds was investigated. Electron acceptor properties in the neobarene system were found to be weaker than in the barene system. For instance, potassium phenylneobarene carboxylate was not decarboxylated in water as was the analogous phenylbarene. However, the C-C bond between the carbonyl carbon and the barene ring in neobarenyl ketones was readily split on treatment with sodium ethylate in ethanol, probably with the intermediate formation of a neobarenyl anion. Neobarenyl ketones were readily reduced with lithium aluminum hydride to the carbinol. An iodine atom connected to a carbon atom of the neobarene ring exhibits positive properties; it is readily exchanged

Card 1/2

UDC: 542.91+547.24

L 8149-66

ACC NR: AP5027694

for hydrogen when the iodoneobarene compound is treated with alcoholic KOH. Synthesis of ketones of the neobarene series was effected by reacting lithium derivatives of neobarene with acid chloroanhydrides. Orig. art. has: 11 equations.

SUB CODE: OC/ SUBM DATE: 01Mar65/ ORIG REF: 001/ OTH REF: 002

nw

Card 2/2

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; SKVORTSOV, Yu.M.; L'VOV, A.I.

Synthesis of vinyl ethers of acetylenic alcohols by indirect vinylation. Zhur. org. khim. 1 no.8:1514-1515 Ag '65.
(MIRA 18:11)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

L 36922-66 EWT(m)/EWP(j) WW/RM

ACC NR: AP6008506 SOURCE CODE: UR/0062/66/000/001/0151/0153

AUTHOR: Zakharkin, L. I.; L'vov, A. I.

ORG: Institute of Heteroorganic Chemistry, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Synthesis of ketones of the barene series

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 1, 1966, 151-153

TOPIC TAGS: chemical synthesis, carboxylic acid chloride, barene series, ketone, organoboron compound

ABSTRACT: Because ketones of the barene series, which contains a carbonyl group linked with the carbon atom of the barene nucleus, are virtually unstudied, the synthesis of only two such ketones having been reported, the authors investigated their synthesis. It is found that ketones of the barene series can be readily synthesized under the effect of lithium derivatives of barenes on the acid chlorides of carboxylic acids. The acid chlorides of aromatic, aliphatic, and heterocyclic acids are introduced into the reaction. The yields of ketones are 50–95% of the theoretical. The 15 ketones synthesized by this method are presented in Table 1. Symmetric and asymmetric bis-barene ketones are synthesized when the acid chlorides of barene carboxylic acids are used. Orig. art. has: 1 table.

Card 1/2 UDC: 542.91+661.718.4

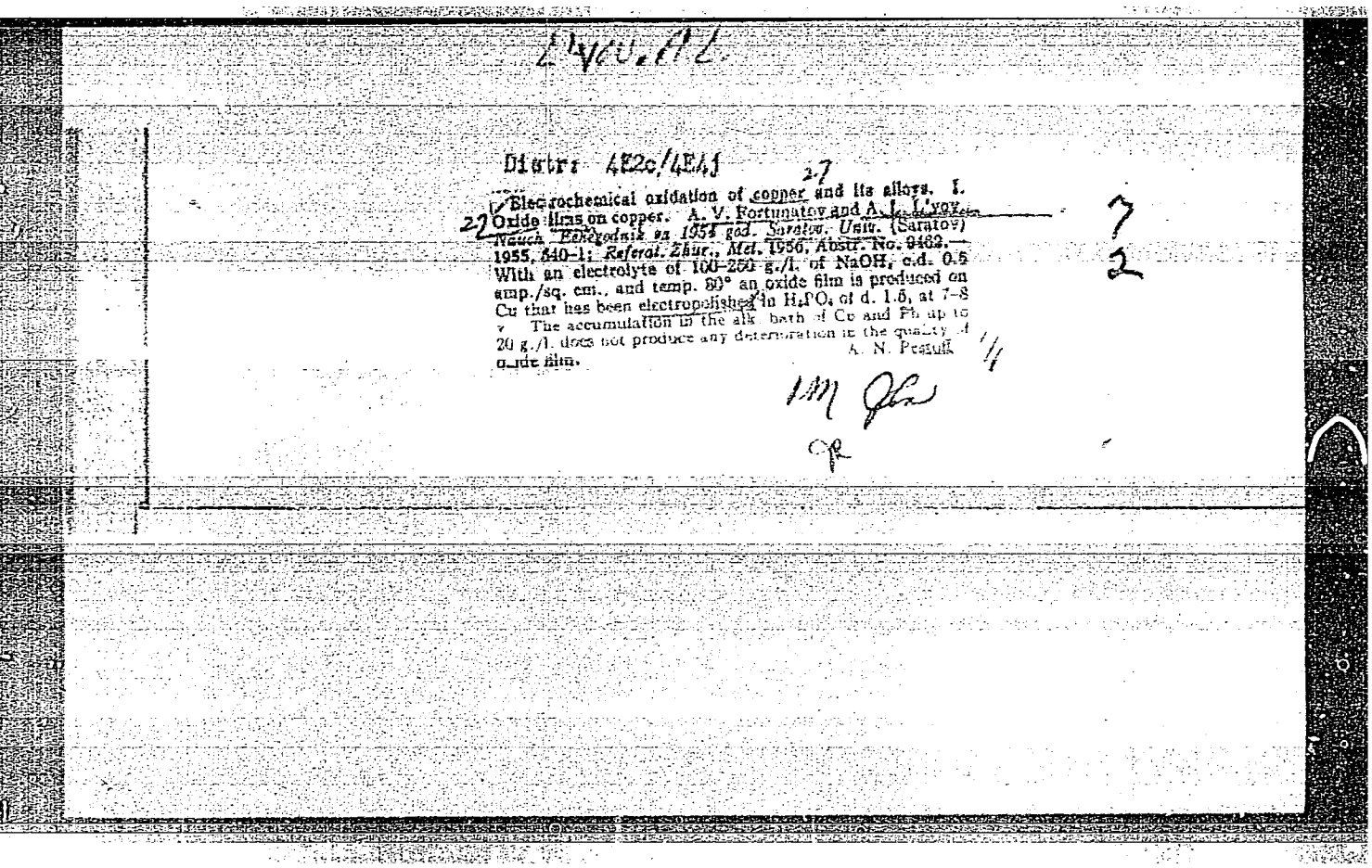
Table 1. Ketones synthesized by the authors.

R	R'	m.p. °C	Found, %			Calculated, %			Frequencies of C=O groups, cm^{-1}
			C	H	B	C	H	B	
CH_3	C_6H_5	67	45,66	6,98	40,36	45,79	6,86	41,25	1687
CH_3	p-CH_3—C_6H_4	101—102	48,48	7,51	38,71	47,81	7,24	39,16	1679
CH_3	p-Cl—C_6H_4	127	40,68	5,76	36,13	40,47	5,73	36,46	1685
CH_3	$C_6H_5CB_{10}H_{10}C$	150	35,95	7,02	53,22	35,64	6,93	53,56	1718
CH_3	$CH_3CB_{10}H_{10}C$	144—145	25,14	7,88	62,49	24,53	7,65	63,15	1713
CH_2=CH	C_6H_5	40—41	48,95	6,75	40,06	48,14	6,61	39,42	1690
CH_2=CH	p-Cl—C_6H_4	80	42,53	5,86	34,90	42,77	5,55	35,03	1692
C_6H_5	CH_3	67—68	45,51	6,97	41,22	45,79	6,86	41,25	1731
C_6H_5	i-C_3H_7	46—47	49,54	7,44	37,10	49,61	7,63	37,25	1725
C_6H_5	C_6H_5	76—77	55,68	6,55	33,32	55,51	6,21	33,34	
C_6H_5	p-Cl—C_6H_4	118—119	50,37	5,67	29,98	50,19	5,33	30,14	1688
C_6H_5	p-CH_3—C_6H_4	82,5	57,5	6,94	31,20	56,76	6,55	31,96	1692
C_6H_5	p-NO_2—C_6H_4 *	146,5	--	—	29,39	48,75	5,18	29,28	1702
C_6H_5	Furyl	128—129	49,49	6,15	—	49,65	5,77	—	—
C_6H_5	$C_6H_5CB_{10}H_{10}C$	217	43,99	6,60	—	43,74	6,48	46,36	1712

* Found: N 3.70%. Calculated: N 3.79%

SUB CODE: 07/ SUBM DATE: 10May65/ ORIG REF: 001/ OTH REF: 000

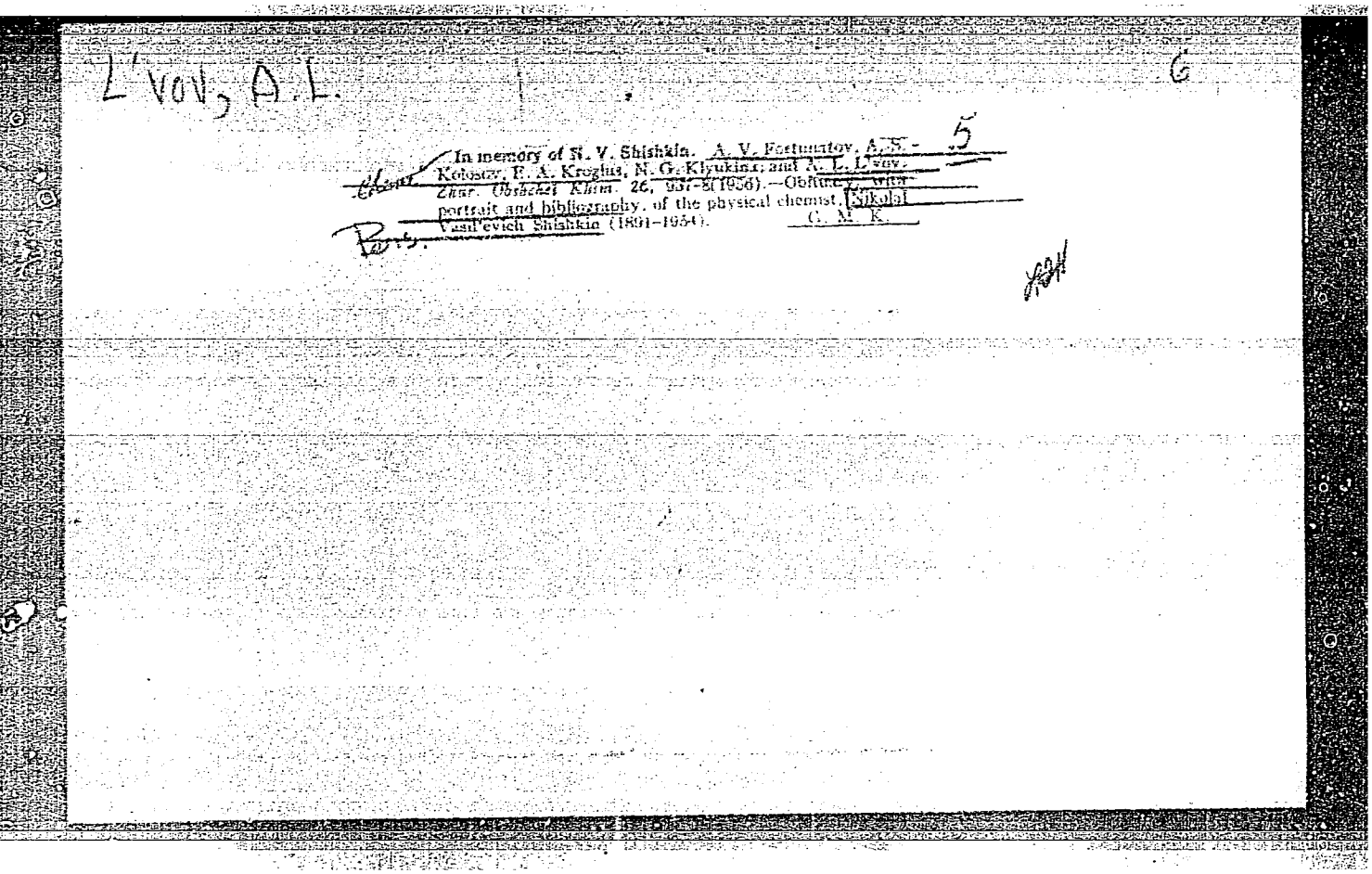
Card 2/2



Distr: 4E2c/4E4j 2.7

Electrochemical oxidation of copper and its alloys. I. Oxide films on copper. A. V. Fortunatov and A. I. Ul'yev. *Nauch. Zapiski za 1954 god. Saratov. Univ.* (Saratov) 1955, 340–1; *Referat. Zhur., Met.* 1956, Abstr. No. 9462. With an electrolyte of 100–250 g./l. of NaOH, c.d. 0.5 amp./sq. cm., and temp. 80° an oxide film is produced on Cu that has been electropolished in H_3PO_4 of d. 1.6, at 7–8 v. The accumulation in the alk. bath of Cu and Pb up to 20 g./l. does not produce any deterioration in the quality of oxide film.

A. N. Pratusk



L'vov, A.L.

In memory of N. V. Shishkin. A. V. Fortunatov, A. S. Kobozev, E. A. Kreglus, N. G. Klyukina, and A. L. L'vov. *Zhur. Obshchei Khim.* 26, 937–8 (1956).—Obituary, with portrait and bibliography, of the physical chemist, Nikolai Vasil'evich Shishkin (1891–1954). C. M. K.

SOV/137-57-11-22116 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 206 (USSR)

AUTHOR: L'vov, A.L.

TITLE: Galvanic Oxidation of Copper (Elektrokhimicheskoye oksidirovaniye medi)

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Candidate of Chemical Sciences, presented to the Saratovsk. un-t (Saratov University), Saratov, 1957

ASSOCIATION: Saratovsk. un-t (Saratov University), Saratov

Card 1/1

5(4)

PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...i [Abornik] (Transactions of the Fourth Conference on Electrochemistry: Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, G.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor; Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and O.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

L'VOV, A.L.; FORTUNATOV, A.V.

Electrochemical oxidation of copper and its alloys. Report No. 4: Oxidation of copper by atmospheric oxygen in alkaline solutions. Uch.zap. SGU 75:120-122 '62.

Electrochemical oxidation of copper and its alloys. Report. No.5: Mechanism of the electrochemical formation of copper oxide in hot concentrated solutions of sodium hydroxide. Ibid.:122-124 (MIRA 17:3)

L'VOV, A.L.; BYSTRITSKAYA, N.V.

Passivity of copper in concentrated solutions of alkali. Zhur. fiz.khim. 37 no.8:1699-1707 Ag '63. (MIRA 16:9)

1. Saratovskiy gosudarstvennyy universitet.
(Copper) (Passivation) (Alkalies)

SOLOMENTSEV, Nikolay Afanas'yevich; L'VOV, Andrey Mikhaylovich; SIMIRENKO, Sof'ya L'vovna; CHEKMAREV, Viktor Aleksandrovich; SHATILINA, M.K., red.; SERGEYEV, A.N., tekhn. red.

[Land hydrology] Gidrologiia sushi. [By] N.A.Solomentsev i dr. Leningrad, Gidrometeor. izd-vo, 1961. 448 p. (MIRA 15:3)
(Hydrology)

L'VOV, A. M.

Dissertation defended for the degree of Candidate of Historical Sciences in the Institute of History

"Agrarian Relations in Bukovina During the Capitalist Epoch."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

L'VOV, A.M.

Courses for increasing the qualifications of leading workers of the hydrometeorological service. Meteor. i gidrol. no.1: 61-62 Ja '56. (MLRA 9:6)
(Meteorology--Study and teaching)

LUK'YANOV, Ye.K.; L'VOV, A.M.; SAMORUKOV, I.A.; GRINGOF, R.N.

New pickup for medical apparatus. Med.prom. 13 no.11:47-52 N '59.
(MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya, SKTB Biofizpribor.
(MEDICAL INSTRUMENTS AND APPARATUS)

L'VOV, A.M.; GRINGOF, R.N.; GEYVINA, M.V.

Phonocardiograph FKG-01. Med.prom. 14 no.11:45-50 N '60. (MIRA 13:11)

1. Samostoyatel'noye konstruktorskoye tekhnologicheskoye biuro "Biofizpribor."
(HEART--SOUNDS)
(MEDICAL INSTRUMENTS AND APPARATUS)

L'VOV, A.M.; GRINGOF, R.N.; GEYVINA, M.V.

Electron stethoscope. Med. prom. 15 no.9:53-56 S '61. (MIRA 14:9)

1. Samostoyatel'noye konstruktorskoye tekhnologicheskoye byuro "Biofizpribor".

(AUSCULTATION--EQUIPMENT AND SUPPLIES)

SAMORUKOV, I.A.; L'VOV, A.M.; GRINGOF, R.N.; LUK'YANOV, Ye.K.

System of lineal compression for the measurement of blood pressure. Med. prom. 15 no.7:30-35 Jl '61. (MIRA 15:6)

1. Samostoyatel'noye konstruktorskoye tekhnologicheskoye byuro "Biofizpribor" i Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya.
(BLOOD PRESSURE)

L'VOV, A.M.

Temporary synchronization during the stimulation of cardiac activity. Nov. med. tekh. no.5:68-71 '61. (MIRA 17:6)

1. Samostoyatel'noye konstruktorsko-tekhnologicheskoye byuro biologicheskogo i fiziologicheskogo priborostroyeniya.

L'VOV, A.M.; KLIMOVA, V.A.; PALIY, A.I.

New variant of the micromethod for water determination by Fischer's reagent. Zhur. anal. khim. 19 no.11:1366-1371 '64. (MIRA 18:2)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR, Moskva.

~~17(8) 9(6)~~)

S/019/60/000/03/082/260
D039/D005

9,6000

AUTHORS: Gankevich, V.I., Geyvina, M.V., Gringof, R.N., Luk'yanov, Ye.K., L'vov, A.M. and Samorukov, I.A.

TITLE: An Electronic Converter of Changes in Pressure of Physiological Process to Changes in Electrical Current

PERIODICAL: Byulleten' izobreteniy, 1960, Nr 3, p 22 (USSR)

ABSTRACT: Class 30a, 4_{02}. Nr 125863 (619285/31 of 26 Jan 59). 1. This converter contains a 40-50 Mc generator, a pickup, and an output unit discriminator. To simplify the design and raise the instrument's sensitivity, the pickup is made in the form of manometric capacitor consisting of two hollow sections separated by a sensitive membrane. It is connected to the generator circuit, so that the pickup capacitance and the frequency of generated oscillations vary as

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D039/D005

An Electronic Converter of Changes in Pressure of Physiological Process to Changes in Electrical Current

the pressure upon the pickup undergoes a change.
2. The output unit discriminator is built around two diodes, the current difference of which passes through the load and is recorded by a recorder as a useful signal.

Card 2/2

Lvov A.N.

GONCHAR, V.Yu., LVOV, A.N., TUTAKIN, P.M, TZYTKO, S.P., VAL'ter, A.K.

(Phys. Teck,, Inst. Acad. Sci. Ukr SSr)

"Polarization of γ Radiation form the Si^{30} $(p,\gamma)p^{31}$ Reaction,"

paper submitted at the All-Union Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

L'VOV, A. N., ANTUFYEV, Yu. P., GONCHAR, V. Yu., KOPANETS, E. G., TZYTKO, S. P. TUTAKIN, P. M. and VAL'TER, A. K.

"Investigation of gamma-Radiation from Si^{30} $(p,\gamma)P^{31}$ Reaction

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow 19-27 Nov 57

Physico-Tech. Inst. Acad. Sci. UkrSSR

L'vov A.N.

AUTHORS Tutakin P.M., Tsytko S.P., L'vov A.N., Valter A.K., Gonchar Yu.V. 89-10-16/36

TITLE The Polarization of γ-Radiation Occuring in the Reaction $Si^{30}(p,\gamma)P^{31}$. (Polyarizatsiya γ-izlucheniya, voznikayuzhchego v reaktsii $Si^{30}(p,\gamma)P^{31}$. - Russian)

PERIODICAL Atomnaya Energiya, 1957, Vol 3, Nr 1o, pp 336-338 (U.S.S.R.)

ABSTRACT The γ-radiation observed with the decay of the excited state with 8,2 MeV energy (J=3/2) in P^{31} into the ground state (J=1/2+) is distinctly polarized.
From the experimentally found angular distribution of the photo-protons there follows (R-1)= -0,51 or R=0,49.
The γ-transition 8,2 MeV belongs to the M_1-type and therefore the level must have 8,2 MeV, spin and parity 3/2 +.
The angular distribution of the 8,2 MeV -γ-transition has the form $\omega(\vartheta) \sim 1 - a_2 \cos^2 \vartheta$ with $a_2 = -0,34 \pm 0,12$, from which it follows that the 8,2 MeV must be a mixture of $M_1 + E_2$.
There are 3 figures and 1 Slavic reference.

SUBMITTED June 2o, 1957
AVAILABLE Library of Congress.

Card 1/1

L'vov, A.N.

21 (7), 21 (8)

SOV/89-7-1-18/26

AUTHOR: Rudakov, V. P.

TITLE: IX All-Union Conference on Nuclear Spectroscopy (IX Vsesoyuznoye soveshchaniye po yadernoy spektroskopii)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 1, pp 76-78 (USSR)

ABSTRACT: The IX All-Union Conference was held from January 26 to February 2, 1959 at Khar'kov. More than 300 participants heard 100 lectures, the most important of which dealt with the following fields: Nuclear Theory. General problems of β-decay. A. S. Davydov (MGU): Theoretical classification of low-energy excited nuclear states. L. K. Peker: Deformed nuclei. B. L. Birbrair, L. K. Peker, L. A. Sliv (LFTI): Quadrupole oscillations of deformed nuclei. Ye. V. [illegible], V. [illegible] Gonchar, S. P. Tsytko (KhFTI): Calculation of the ft-values with matrix elements for β-transitions by means of the generalized nuclear model. S. T. Belyayev (IAE): Consideration of pair-correlation in nuclei. A. [illegible] (IAE): The application of the superconductivity model to nuclei for the purpose of calculating their moments of inertia. P. E. Nemirovskiy (IAE). Problems of the neutron stability of nuclei. [illegible] (IAE): The present stage in the theory of β-decay. [illegible], V. K. Grigor'yev, V. A. [illegible], [illegible] (ITEF): Measurement of the angular correlation between electron and neutrino in the decay of the neutron. V. M. Lobashev, V. A. Nazarenko, L. F. [illegible] (LFTI): Measurement of the correlation between the transversal electron polarization and circular polarization of γ-quanta occurring in the decay of Sc^{46} and Co^{60}. Decay Schemes. γ-radiation of Nuclei. [illegible] Anufriyev, A. K. Val'ter, Yu. V. Gonchar, Ye. [illegible], A. N. L'vov, P. M. Tutakin, S. P. Tsytko, P. V. Sorokin, A. S. [illegible], I. Ya. Malakhov, A. [illegible] (Fiziko-tekhnicheskiy Khar'kovskiy institut (Physico-technical Institute, Khar'kov)): The $Si^{28,29,30}(p,\gamma)$, $Ne^{20}(p,\gamma)$, $S^{32-34}(p,\gamma)$, $Ar^{40}(p,\gamma)$ and $N^{14}(p,\gamma)$ reactions. D. G. Alkhazov, A. P. Grinberg, G. M. Gusinskiy, M. Kh. Lemberg, V. V. Rozhdestvenskiy, Z. N. [illegible] of the Leningradskiy fiziko-tekhnicheskiy institut (Leningrad Physico-technical Institute): Investigation of the Coulomb excitation of the lower levels of some nuclei during their bombardment by multiply charged ions (C, N, O, and Ne). A. V. Kalyamin, A. N. Murin, V. N. Pokrovskiy, V. A. Yakovlev (RIAN): New isotopes Tu^{161}, Ho^{153}, Ho^{155} and Ho^{157}. B. S. Dzhelepov, V. A. Sergiyenko (LGU): Decay schemes of some neutron-deficient isotopes, set up on the basis of measurements of the coincidence of the internal conversion electrons. Spectroscopy Engineering. B. S. Dzhelepov, R. B. Ivanov, [illegible], V. G. Chumin (RIAN): α-spectrometer with double focusing. S. A. [illegible], V. V. [illegible], A. G. Zelenkov, A. F. Malov, G. Ya. Shchepkin (IAE): Improved α-spectrometer. [illegible] Barchuk, [illegible] V. Belyak, V. I. Zolyshkin, V. A. [illegible] (IFAN UkrSSR): Magnetic spectrograph for heavy charged particles. The representatives of the Ministerstvo radiotekhnicheskoy promyshlennosti (Ministry of the Radio-engineering Industry) gave a report about new multipliers. The Conference was closed by B. S. Dzhelepov, who stressed the fact that nuclear tables and reference works ought to be published much more quickly in order to be of real use to the experimenter.

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21(7) SOV/48-23-2-13/20

AUTHORS: Val'ter, A. K., Gonchar, V. Yu., L'vov, A. N., Tsytko, S. P.

TITLE: Investigation of γ Rays Caused by Proton Bombardment of an Ne^{20}-containing Target (Issledovaniye γ-luchey, voznikayushchikh pri bombardirovke protonami misheni, soderzhashchey Ne^{20})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 228-234 (USSR)

ABSTRACT: In a short introduction a decay scheme of the lower levels of the nuclei Ne^{21} and Na^{21} is given according to data contained in references 1-3 and 4-6, 7. In the present paper the characteristics of the level 3.57 Mev in the Na^{21} nucleus were investigated in detail in the reaction $Ne^{20}(p,\gamma)Na^{21}$. The authors measured the radiation yield in dependence on the energy of the bombarding particles (Fig 1).10 resonances were found. The energies and experimental width of these resonances are given in table 1. Furthermore, the authors studied the β activity of the same target with energies corresponding to the resonance, as well as the γ spectrum of all 10 resonance energies. All measurement results are listed in table 1. It follows from the evaluation of all data obtained that the

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Investigation of γ Rays Caused by Proton Bombardment of an Ne^{20}-containing Target

resonance energy with the proton energy 1175 kev corresponds to the reaction $Ne^{20}(p,\gamma)Na^{21}$. The energy of the corresponding γ-radiation amounts to 3.60 Mev. According to the calculation of mass defect with the proton energy 1175 kev the same value 3.58 Mev is determined. Accurate investigations have shown that this 3.60 Mev γ line corresponds to the transition into the ground state. The angular distribution of dipole and quadrupole γ transitions was calculated and compared to values obtained by experiments. In addition, spin and parity of the 3.58 Mev level of Na^{21} were determined to be $5/2^+$. There occurs a dipole transition $5/2^+ \longrightarrow 3/2^+$ (Table 5). The authors thank M. I. Guseva for production of the Ne^{20} target and Ye. V. Inopin for discussion of the results obtained. There are 4 figures, 5 tables, and 17 references, 4 of which are Soviet.

SOV/48-23-2-13/20

Investigation of γ Rays Caused by Proton Bombardment of an Ne^{20}-containing Target

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR
(Physicotechnical Institute of the Academy of Sciences, UkrSSR)

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SOV/48-23-7-11/31

24(5),21(7)
AUTHORS: Val'ter, A. K., Gonchar, V. Yu., L'vov, A. N., Tsytko, S. P.

TITLE: The Investigation of Low-lying Levels of the Isotope Cl^{33} by Means of the Reaction $S^{32}(p,\gamma)Cl^{33}$
(Issledovaniye nizkolezhashchikh urovney Cl^{33} pri pomoshchi reaktsii $S^{32}(p,\gamma)Cl^{33}$)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 835-838 (USSR)

ABSTRACT: The introduction indicates some papers on the lower levels of the Cl^{33}-nuclei, pointing out the paper by Meyerhof and Lindstrom (Ref 3) in which the multiple β-decay on the 2.9 Mev-level is attributed to a positive parity. To check this assumption, the authors carried out the experiments described in this paper. The electrostatic precision generator of 4 Mev of the FTI AS UkrSSR was used for this purpose. In the measurement of the γ-yield, resonances were found at 583 and 590 kev, as well as a half-life of 2.3 sec, which agrees with the known data. Further, the scheme of γ-transitions shown in figure 2 was established by the authors by means of the

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The Investigation of Low-lying Levels of the Isotope Cl^{33} by Means of the Reaction $S^{32}(p,\gamma)Cl^{33}$ SOV/48-23-7-11/31

γ-spectrum. The angular distribution of the γ-rays in the reaction $S^{32}(p,\gamma)Cl^{33}$ was measured, and the results are shown in table 1 and figures 3 and 4. From these results, conclusions concerning the spin and the character of transitions are made, and it is shown that the spin and the parity of the 2.850 Mev-level is equal to $5/2^+$. With the level scheme shown in figure 2, conclusions are made concerning the spin, parity and energy of the next level. Finally, the authors thank M. I. Gusev for the preparation of the S^{32}-target, and Ye. V. Inopin for his interest in the work, Yu. P. Antuf'yev and Ye. G. Kopanets for the execution of the measurements, as well as A. A. Tsygikalo and Yu. A. Kharchenko who secured the work at the generator. There are 4 figures, 1 table, and 9 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physico-technical Institute of the Academy of Sciences, UkrSSR)

Card 2/2

L'vov, A. N.

05574

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B019/B056

24.6100

AUTHORS: Antuf'yev, Yu. P., Val'ter, A. K., Gonchar, V. Yu., Kopanets, Ye. G., L'vov, A. N., and Tsytko, S. P.

TITLE: An Investigation of the Levels of the Cl^{35} Nucleus

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 7, pp. 877-883

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. The authors studied the levels and the quantum characteristics of the Cl^{35}-nucleus by means of the reaction $S^{34}(p,\gamma)Cl^{35}$. The excitation function, the spectrum, and the angular distribution of the γ-rays were measured. The investigations of the S^{34} target were carried out by means of a monochromatic proton beam accelerated to 4 Mev in the electrostatic generator of the FTI AS UkrSSR. The γ-rays were recorded by means of a CsI(Tl) crystal. When studying the excitation function, γ-quanta with $E_{\gamma} > 1.5$ Mev were recorded. In the Table, the proton energies are given,

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at which γ-resonance was observed; also given are the relative intensities of the resonance peaks and the energies of the excited Cl^{35} levels. For the purpose of studying the spectra and the angular distributions of the γ-rays, the authors used a monocrystal scintillation spectrometer. On the basis of the data obtained, the authors suggest the Cl^{35} transition scheme shown in Fig. 5. Resonances in the case of four proton energies (E_p) are discussed in detail. The resonance at E_p = 848 kev corresponds to the 7.196 Mev Cl^{35} level, for which a γ-transition to the 1.22 Mev level occurs with a probability of 95%, and a γ-transition to the ground state of Cl^{35} occurs with a probability of not more than 5%. For the 7.196 Mev level, $1/2^+$ is presumed. The resonance at E_p = 890 kev corresponds to the 7.236 Mev of the level of the Cl^{35}. The γ-spectrum indicates a transition from this level to the ground state. Also transitions to the 1.22-Mev level are possible. For the 7.236-Mev level, $5/2^+$ is assumed. Resonance at E_p = 929 kev corresponds to the 7.274-Mev level, from which transitions to the ground state (70%) and to the 1.22-Mev level (30%) occur. For this level, a spin of 1/2 is assumed, but here a more exact investigation is necessary. The authors carried out preparatory measurements of the spectra

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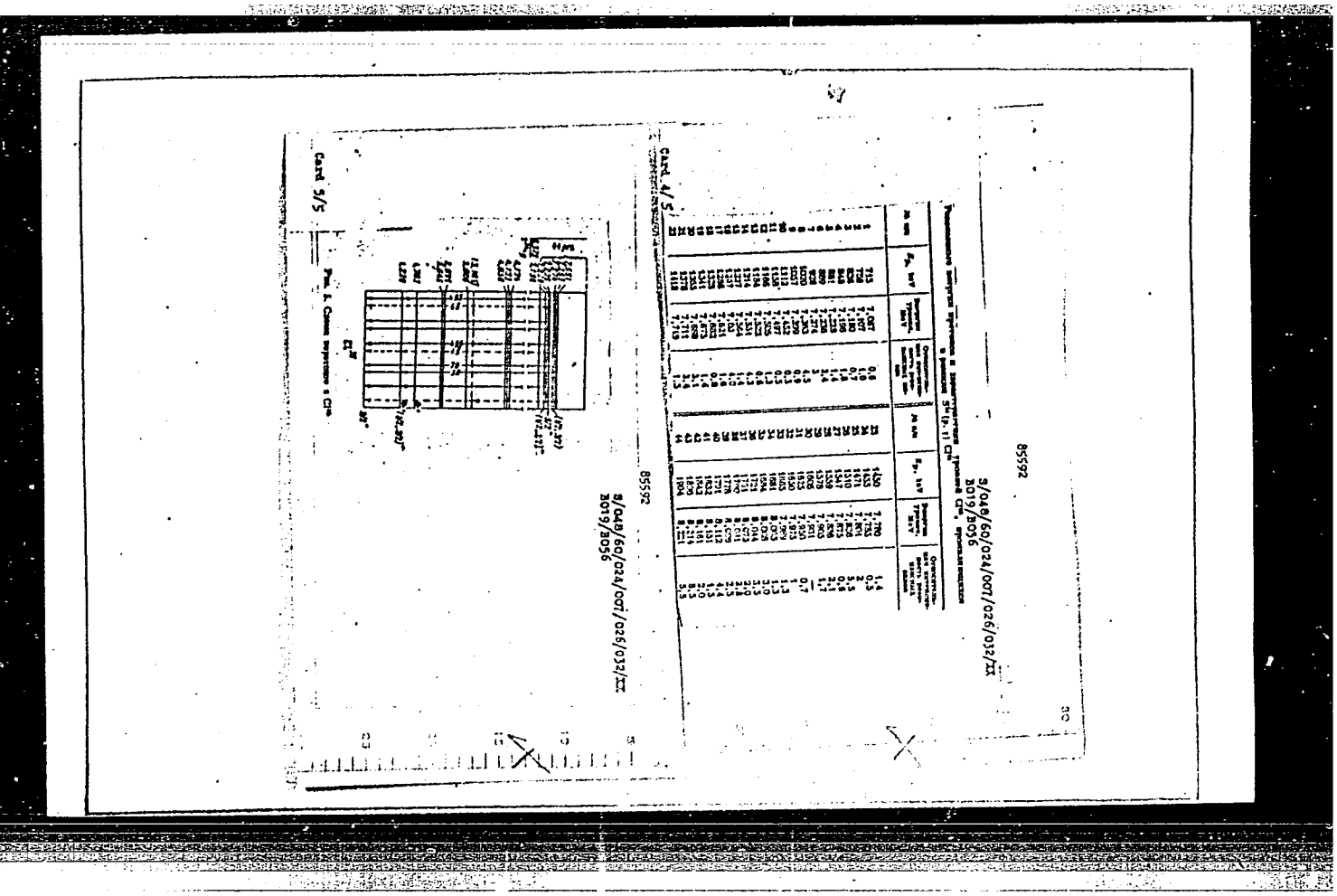
and of angular asymmetry of the γ-rays for the resonances at E_p = 881, 1024, and 1214 kev. By a further investigation of the angular distributions and correlation of the γ-cascade transitions, the problems arising in this connection are expected to be cleared. The authors thank M. I. Guseva for producing the S^{34} target, and A. A. Tsygikalo and Yu. A. Kharchenko for work carried out on the accelerator. There are 5 figures, 1 table, and 8 references: 4 Soviet and 4 US.

ASSOCIATION: Khar'kovskiy fiziko-tekhnicheskiy institut Akademii nauk USSR (Khar'kov Institute of Physics and Technology of the Academy of Sciences, UkrSSR)

Card 3/5



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S/048/60/024/007/008/011
B019/B060

AUTHORS: Val'ter, A. K., Antuf'yev, Yu. P., Gonchar, V. Yu., L'vov, A. N., Kopanets, Ye. G., Tsytko, S. P.

TITLE: A Study of the K^{41} Levels With the Aid of the $Ar^{40}(p,\gamma)K^{41}$ Reaction /9

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 7, pp. 891-894

TEXT: This is the reproduction of a lecture delivered at the 10th All-Union Conference on Nuclear Spectroscopy held in Moscow from January 19 to 27, 1960. The investigations described were carried out by using an electrostatic precision generator serving for the proton acceleration. The thin Ar^{40} target was prepared in an electromagnetic separator. The excitation function of the reaction was measured by a scintillation counter provided with a CsI(Tl) crystal, a proton current integrator serving for measuring the proton beam hitting the target. Fig. 1 shows the excitation function of the reaction under investigation in the proton energy range

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A Study of the K^{41} Levels With the Aid of the $Ar^{40}(p,\gamma)K^{41}$ Reaction

S/048/60/024/007/008/011
B019/B060

of 1085 - 1130 kev. Resonances were identified at 1092, 1107.5, 1114.5, and 1125 kev proton energies. The most intensive resonances occurred at 1092 kev and 1107.5 kev and their gamma spectrum was investigated. Fig. 2 is a graph depicting the soft and the hard part of the gamma spectrum of resonance at 1107.5 kev. These spectra are thoroughly discussed and the authors suggest a decay scheme of the excited K^{41} levels (Fig. 3), which also indicates the spins for some levels. The authors thank M. I. Guseva for having prepared the targets. There are 3 figures and 12 references: 6 Soviet, 5 US, and 1 Canadian.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Institute of Physics and Technology of the Academy of Sciences UkrSSR)

Card 2/2

S/048/61/025/002/010/016
B117/B212

AUTHORS: Antuf'yev, Yu. P., Gonchar, V. Yu., Kopanets, Ye. G., L'vov, A. N., and Tsytko, S. P.

TITLE: A double-crystal spectrometer and its application in studying (pγ) reactions

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 2, 1961, 261-264

TEXT: The present paper was read at the 11th Annual Conference on Nuclear Spectroscopy (Riga, January 25 to February 2, 1961). The authors describe a double-crystal spectrometer with a universal hookup. This makes it possible to use the unit as a coincidence spectrometer and summation spectrometer. The hookup was designed in the fiziko-tekhnicheskiy institut AN USSR (Institute of Physics and Technology of AS UkrSSR) and was used for one year to investigate a number of (pγ) reactions. Fig. 1 shows the circuit diagram of the unit. Two NaI(Tl) crystals, having a diameter of 70 mm, were used as counters; one of them as 60 mm high, and its energy resolution was 11% for 661-kev gamma rays, the other was 40 mm high, but had an energy

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resolution of 14% for gamma rays with the same energy. Besides, 40 mm-high NaI(Tl) crystals with a diameter of 40 mm and a resolution of 9% have been used. The crystals were attached to the photomultiplier of the type ФЭУ-1Б (FEU-1B). The latter was designed by Khlebnikov. The crystals themselves are mounted on a truntable and thus may be adjusted at any angle with respect to each other and the proton beam after modulation the pulses of the ninth dynode of the photomultiplier had a duration of 3 sec and flat peaks. They are amplified by linear amplifiers which have a maximum amplification factor of 100. This amplification may be varied by means of a stepped attenuator. The pulses of the fast-coincidence circuit are emitted from the plates of the photomultiplier. They are modulated by a short circuited delay line (5 m РК-50 (RK-50) cable). Thus, per coincidence circuit a pulse duration of $5 \cdot 10^{-8}$ sec is obtained. A tube of the type 6А3П (6A3P) has been used for the coincidence circuit. The discharge of the latter starts the multivibrator which generates the driving pulse that is transmitted to the pulse-height analyzer of the type АИ-100-1 (AI-100-1). Such a circuit has been described in Ref. 3. The output of the second linear amplifier is fed to the input of the pulse-height analyzer via the limiter and an additional amplifier with an amplification factor of 5. The ana-

S/048/61/025/002/010/016
B117/B212

lyzer is opened in the case of synchronized pulses of both photomultipliers. After leaving the linear amplifier the pulses have a specific height. A pulse can be transmitted from the photomultiplier via this amplifier which controls the scanning of the electron-beam tube. In this case, a coincidence spectrum is obtained from the other photomultiplier in which part of the total gamma-ray spectrum is separated. It is also possible to transmit a pulse which is equal to the sum of the pulses in both photomultipliers. In this case, a gamma spectrum is obtained in which the sum of the radiation energy attains the given value. In order to illustrate the operation of a spectrometer, test results for a constant Co^{60} source and for a nuclear reaction of $Al^{27}(p\gamma)Si^{28}$ are discussed. Within $\pm$ 15%, the experimental data for the first case agree with the calculated values. For the second case, a much more accurate spectrum has been obtained than with a single-crystal spectrometer. The circuit diagram of the spectrometer may also be used for a Compton spectrometer, and the pulse-height analyzer is also opened by a pulse of a Compton gamma quantum scattered through a certain angle. In addition, it may also be used as spectrometer for total absorption, if the circuit is closed at the presence of a scattered quantum. Apart from the feeding tubes, the circuit consists of 28 more tubes. There are 3 figures

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Physico-Tech Inst AS Ukr SSR

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B117/B212

AUTHORS: Antuf'yev, Yu. P., Val'ter, A. K., Gonchar, V. Yu., Kopanets, Ye. G., L'vov, A. N., and Tsytko, S. P.

TITLE: Radiative proton capture by the S^{34} isotope

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, V. 25, no. 2, 1961, 265-269

TEXT: The present paper was read at the 11th Annual Conference on Nuclear Spectroscopy (Riga, January 25 to February 2, 1961). The authors have investigated the radiative proton capture by S^{34} at a 1214-kev resonance energy. The gamma spectra were analyzed by means of a single-crystal spectrometer, a coincidence spectrometer, and a summation spectrometer. Based on the values obtained, the authors state that the transition of the 7.5-Mev resonance level proceeds only cascade-like over an intermediate level. The energies of the gamma rays in the cascade are 3.17 and 4.38 Mev. A direct transition to the ground state may have a relative intensity of less than 0.5%. The angular distribution of gamma rays was measured for rays with 4.38 Mev and 3.17 Mev at an angular interval of 0-150 degrees on both sides

of the proton beam. Test data and calculated data were intercompared. They were in best agreement when the spins of the resonance- and intermediate levels were equal to 7/2. The value of the gamma-gamma correlation, measured with the summation spectrometer, corresponds (within the limit of error) to the calculated value, which fact confirms a spin of 7/2. An analysis of the relative transition probability from the resonance level to the ground state and the intermediate state with a spin of $3/2^+$ and $7/2^\pm$, respectively, leads to the conclusion that the parity of the resonance and intermediate levels must be negative, and that the transition from the resonance level to the ground state must be -M2. The presence of one more level with the spin $7/2^-$ near 7.55 Mev, which corresponds to a resonance level, cannot be explained by single-body excitation on a shell- or generalized model. It may be assumed therefore that this level corresponds to a two-body excitation. A comparison of the values obtained experimentally for the width of the resonance level with those calculated according to a single-body model confirmed this assumption. The authors determined the absolute yield of gamma rays from a thick S^{34} target and found it to be $2.56 \cdot 10^{-9} \pm 15\%$ per each proton decay. The authors thank M. I. Guseva for preparing the isotopic targets, A. A. Tsygikalo, Yu. A. Kharchenko, and the personnel of the electrostatic generator for the smooth operation of the latter.

Physico-Tech. Inst. Acad Sci Ukr SSR

VAL'TER, A.K.; TSYTKO, S.P.; ANTUF'YEV, Yu.P.; KOPANETS, Ye.G.; L'VOV, A.N.

Studying the levels of P^{31} by the aid of the $Si^{30}(p,\gamma)P^{31}$ reaction. Izv. AN SSSR. Ser. fiz. 25 no.7:854-861 Jl '61. (MIRA 14:7)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Phosphorus--Isotopes) (Silicon--Isotopes)
(Nuclear reactions)

VAL'TER, A.K.; ANTUF'YEV, Yu.P.; KOPANETS, Ye.G.; L'VOV, A.N.; TSYTKO, S.P.

Quantum characteristics of the 6.847 Me. level of P^{30} observed in the reaction $Si^{29}(p,\gamma)P^{30}$. Zhur. eksp. i teor. fiz. 41 no.5:1449-1453 N '61. (MIRA 14:12)

1. Fiziko-tekhnicheskiy institut AN Ukrainskoy SSR.
(Nuclear reactions) (Phosphorus)
(Silicon—Isotopes)

S/048/62/026/009/003/011
B125/B186

AUTHORS: Val'ter, A. K., Antuf'yev, Yu. P., Kopanets, Ye. G., L'vov, A. N., and Tsytko, S. P.

TITLE: Decay scheme of the 8.92-Mev state and quantum characteristics of the lower levels of the K^{41} nucleus

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 9, 1962, 1137-1142

TEXT: In continuation of an earlier paper by A. K. Val'ter et al. (Izv. AN SSSR, Ser. fiz., 24, no. 7, 891 (1960) on the reaction $Ar^{40}(p,\gamma)$ the 1107.5 kev resonance is studied. The proton beam from the electrostatic generator of the FTI AN USSR was made to strike the target through a collimating system. Ar^{40} ions were "knocked" into the tantalum backing of such targets. Fig. 1 shows the hard part of the spectrum taken by a γ-spectrometer with an NaI(Tl) crystal. The peaks R, A, B, C, and D of the soft part are at 0.5; 0.6; 1.0; 1.3, and 1.6 Mev. The spectrum of Fig. 3 was taken by a coincidence spectrometer with two crystals. The

Decay scheme of the 8.92-Mev ...

lines A, B, C, D coincide with the hard part of the spectrum. The anisotropy $A = (W(90^\circ)-W(0^\circ))/W(90^\circ)$ of the angular distribution of the γ-rays at 7.9; 7.3; 6.3; 1.6 and 1.0 Mev is 0.48; -0.54; +0.14 and +0.05, respectively. There is no transition between the 8.92-Mev resonance level and the ground state. Most of the transitions coming from the resonance level have the same probability. The 2.6-Mev state passes to the ground state rather indirectly over the 1.0-Mev level or over the 1.6-Mev level. The line intensity ratio $I_D/I_A \simeq 1$ remains almost constant from $E_\gamma = 6.0$ to $E_\gamma = 6.8$. Then it decreases rapidly to ~ 0.22 with $E_\gamma \sim 6.8$ and ~ 0.18 with $E_\gamma \sim 7.6$ Mev. The levels with 1.0 and 1.3; 1.6 and 2.6 Mev are formed according to the scheme of Nillson S. P., Danske Mat. fys. medd., 29, No 16 (1955) by single-particle excitation when an unpaired proton passes onto states with $1/2^-$, $7/2^-$, $3/2^-$ and $5/2^-$. The 8.92-Mev resonance level occurs when a proton in the state $g_{9/2}$ with $\Omega = 3/2^+$ is captured. For the levels 1.0; 1.6; 6 and 8.82 Mev the spins and parities $1/2^-$, $3/2^-$, $5/2^-$, and $3/2^-$ are the most probable. These values are also compatible with the shell model having a strong jj-coupling. There are 6 figures and 2 tables.

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B125/B186

Decay scheme of the 8.92-Mev ...

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physicotechnical Institute of the Academy of Sciences UkrSSR)

Fig. 1. β-ray spectrum studied with a "single-crystal" spectrometer (hard part).

Fig. 3. β-ray spectrum studied with the aid of a "summing" spectrometer.
Fig. 5. Scheme of the levels of the K^{41} nucleus
Table 2. Possible values of the level spins.

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Decay scheme of the 8.92-Mev ...

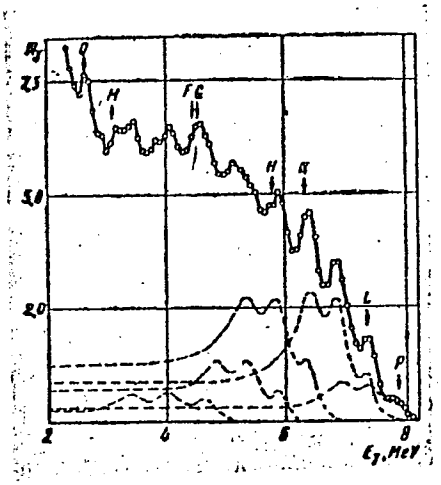
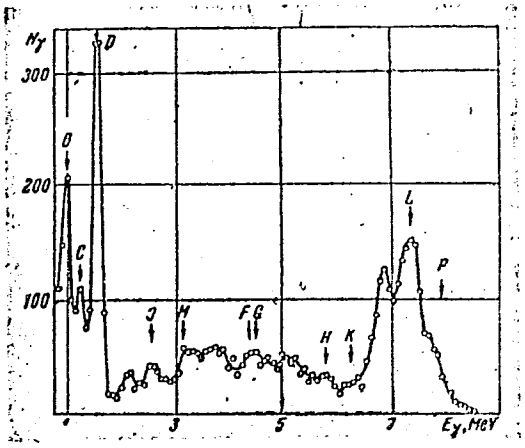


Fig. 1

Fig.3



Card 4/6

Decay scheme of the 8.92-Mev ...

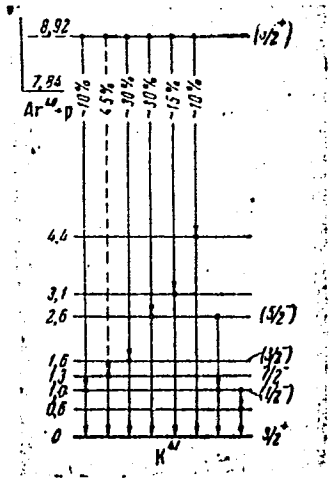


Fig. 5

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S/048/62/026/009/003/011
B125/B186

Table 2

$I_{pe3} = 1/2$							$I_{pe3} = 3/2$						
E^* MeV	I			$\delta^2 = \frac{I_{L=2}}{I_{L=1}}$			E^* MeV	I			$\delta^2 = \frac{I_{L=2}}{I_{L=1}}$		
1,0	1/2	—	3/2	0,03	—	0	1,0	3/2	—	7/2	0,04	—	0
1,6	—	3/2	—	—	0,01	—	1,6	—	5/2	7/2	—	0,03	0,1
2,6	1/2	—	5/2	0	—	0,09	2,6	3/2	—	7/2	0	—	0,03

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S/056/62/042/002/013/055
B102/B138

AUTHORS: Antuf'yev, Yu. P., Val'ter, A. K., L'vov, A. N., Kopanets, Ye. G., Tsytko, S. P.

TITLE: Investigation of the resonances in the reaction $Si^{29}(p,\gamma)P^{30}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 386-391

TEXT: The relative gamma quantum yield of the reaction $Si^{29}(p,\gamma)P^{30}$ was measured in the range $1.3 \leqslant E_p \leqslant 1.55$ Mev. Of the five resonances detected, those at E_p = 1375 and 1500 kev were studied in detail; the others were at 1308, 1330, and 1470 kev. For the 1375-kev resonance, related to the 6.892-Mev level of the P^{30} nucleus and the 1500-kev resonance (7.014-Mev level), the spectra and the gamma-quantum angular distributions were determined. The parameters of the gamma lines of these spectra were determined numerically and the decay schemes (Figs. 5, 6) are given. For the most intense line (6.20 Mev) of the 1375-kev resonance spectrum the angular asymmetry of the angular distribution $W = 1 + A\cos^2\vartheta$ (dipole

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γ-transition) was measured as $A = [W(0^\circ) - W(90^\circ)]/W(90^\circ) = -0.63 \pm 0.05$. The corresponding value, $A = 1.07 \pm 0.10$ was measured for the most intense gamma line (2.83 kev) of the 1500-kev resonance spectrum. The values of the level parameters J^π and T are discussed. There are 6 figures, 3 tables, and 5 references: 3 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: P. M. Endt et al. Phys. Rev. 95, 580, 1954; C. Van der Leun, P. M. Endt. Phys. Rev. 110, 89, 1958.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: August 17, 1961

Figs. 5 and 6. Decay schemes and gamma transitions from the resonance levels 6.892 and 7.014 kev, respectively.

VAL'TER, A.K.; ANTUF'YEV, Yu.P.; KOPANETS, Ye.G.; L'VOV, A.N.; TSYTKO, S.P.

Decay scheme of an 8.92 Mev. resonance state and quantum characteristics of the lower levels of the K^{41} nucleus. Izv. AN SSSR. Ser. fiz. 26 no.9:1137-1142 S '62. (MIRA 15:9)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Nuclear reactions) (Quantum theory)
(Potassium—Isotopes)

VAL'TER, A.K.; KOPANETS, Ye.G.; L'VOV, A.N.; TSYTKO, S.P.

Interpretation of the levels of the odd-odd P^{30} nucleus according to Nilsson's model. Izv.AN SSSR.Ser.fiz. 27 no.2: 228-231 F '63. (MIRA 16:2)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.
(Phosphorus isotopes) (Nuclear models)

S/048/63/027/002/011/023
B104/B180

AUTHORS: Val'ter, A. K., Kopanets, Ye. G., L'vov, A. N., and Tsytko, S. P.

TITLE: Investigation of the γ-radiation corresponding to the 1308 kev resonance in the $S^{29}(p,\gamma)P^{30}$ reaction

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 2, 1963, 232 - 234

TEXT: The 1308 kev resonance was investigated using monoenergetic protons and a scintillation γ-spectrometer. The total characteristic of the NaI(Tl) crystal (70 mm diam., 50 mm high) was determined in careful preliminary studies so as to analyze the complicated γ-spectrum reliably. Fig. 1 shows a part of the spectrum corresponding to the resonance. From this spectrum and from the angular distribution of the γ-radiation the decay scheme shown in Fig. 2 was constructed, which corresponds to earlier published data (Tsytko, S. P., Antuf'yev, Yu. P., Zh. eksperim. i teor. fiz., 30, no. 6 (1956)). The most curious result is that the state with 2,94 Mev, with 2^+, decays by a γ-transition with 10% higher probability to the first

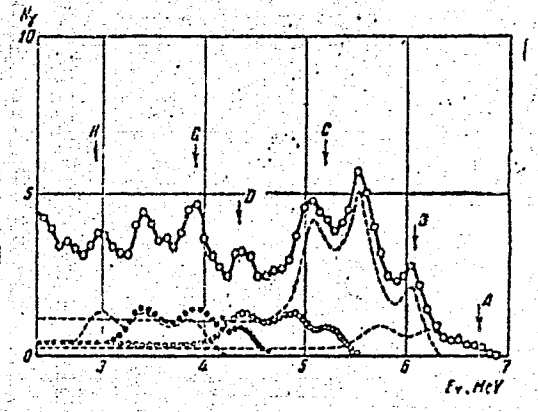
Investigation of the γ-radiation...

excited level than to the ground state. There are 2 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physico-technical Institute of the Academy of Sciences UkrSSR)

Fig. 1. Hard section of the γ-spectrum corresponding to the 1308 kev resonance.

Fig. 1



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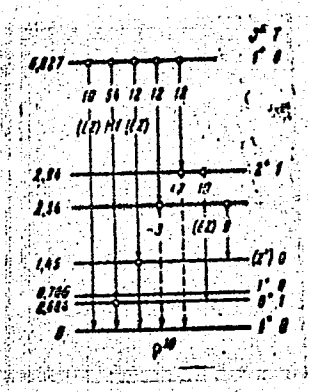
Investigation of the γ-radiation...

Fig. 2. Decay scheme of the P^{30} resonance level with an excitation energy of 6.827 Mev (E_p = 1308 kev).

Fig. 2



Card 3/3

VAL'TER, A.K.; KOPANETS, Ye.G.; L'VOV, A.N.; STEGNER, A.; TSYTKO, S.P.

Study of the reaction $Mg^{26}(p,\gamma)$ Al^{27} at proton energies ranging from 1.8 to 2 Mev. Izv. AN SSSR. Ser. fiz. 27 no.11:1419-1426 N '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR. 2. Institut yadernykh issledovaniy, Varshava, Pol'skaya Narodnaya Respublika (for Stegner).

.. K.; KOPANETS, Ye. G.; L'VOV, A. N.; TSYTKO, S. P.

"Radiative Capture and Inelastic Scattering of Protons by Nuclei of Mg^{26}."

"Excited States of the Nucleus Al^{27}."

reports submitted for all-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

KhFTI (Ukrainian Physico Technical Inst, Khar'kov)

[illegible], A. K.; KOPANETS, Ye. G.; L'VOV, A. N.; TSYTKO, S. P.

"Inelastic Scattering of Protons by Nuclei Ar^{36}."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

KhFTI (Ukrainian Physico Technical Inst, Khar'kov)

ACCESSION NR: AP4024050 S/0048/64/028/002/0271/0274

AUTHOR: Val'ter, A.K.; Kopanets, Ye.G.; L'vov, A.N.; Tsy*tko, S.P.

TITLE: Radiative proton capture by Mg^{26} at proton energies from 2.0 to 2.3 MeV /Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14 to 22 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 271-274

TOPIC TAGS: radiative proton capture, decay scheme, Al^{27} decay, Al^{27} levels, Al^{27}, Mg^{26}

ABSTRACT: Radiative proton capture by Mg^{26} at proton energies below 2 MeV was investigated earlier by the authors (Izv.AN SSSR.Ser.fiz.27,No.10,1963; Ibid.27,No.11, 1963) and by P.M.Endt and C.Van der Leun (Nucl.Phys.34,No.1,1962). As a result of these studies there was obtained information on the levels in Al^{27} in the excitation energy range from 8.0 to 10.2 MeV. The only information available on the levels in the 10.2 to 11.5 MeV range was obtained from a study of elastic scattering of protons by Mg^{26} (A.I.Popov, P.V.Sorokin, V.E.Storizhko and A.Ya.Taranov,Izv.AN SSSR, Ser.fiz.26,1074,1961). Hence in the present work there were investigated the γ-rays

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ACCESSION NR: AP4024050

from the $Mg^{26}(p,\gamma)Al^{27}$ reaction at proton energies from 2.0 to 2.3 MeV in order to obtain information on the characteristics of the levels in Al^{27} in the 10.2 to 10.5 MeV excitation energy range. The source of protons for the experiments was the electrostatic generator of the Physico-technical Institute (Academy of Sciences USSR) (A.K.Val'ter and A.A.Tsygikalo, Pribory i tekhnik eksperim.4,3,1957). The isotopic Mg^{26} target was prepared in an electromagnetic separator by the method of knocking Mg^{26} ions into a tantalum backing. For measuring the excitation function the γ-ray detector was an NaI(Tl) crystal coupled to an FEU-42 photomultiplier. The γ-ray spectrum was investigated by means of the scintillation spectrometer described by Yu.P.Antuf'yev et al (Izv.AN SSSR,Ser.fiz.25,261,1961). The excitation function recorded for the reaction is shown in Fig.1 of the Enclosure. The fifteen observed resonances are characterized in a table; another table gives the results of analyses of the γ-spectrum for six of the resonances. The decay scheme for the six investigated resonance levels is shown in Fig.2 of the Enclosure. The spin assignments arrived at for some of the levels are given in this figure. "The authors express their gratitude to M.I.Gusev for preparing the Mg^{26} targets and to Yu.A.Kharchenko and the personnel servicing the electrostatic accelerator." Orig.art.has: 3 figures and 2 tables.

Card 2/3

ACCESSION NR: AP4024080

ASSOCIATION: none

SUBMITTED: 14Oct63	DATE ACQ: 08Apr64	ENCL: 02
SUB CODE: NS	NR REF SOV: 007	OTHER: 002

Card 3/5